



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,222	03/03/2004	Walter L. Moden	3389.8US (97-0638.08/US)	4777

24247 7590 02/28/2007  
TRASK BRITT  
P.O. BOX 2550  
SALT LAKE CITY, UT 84110

EXAMINER
----------

TRINH, MINH N

ART UNIT	PAPER NUMBER
----------	--------------

3729

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/28/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/792,222

Applicant(s)

MODEN ET AL.

Examiner

Minh Trinh

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicants amendment filed on 12/18/06 has been fully considered and made of record.

#### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed subject matter such as "providing the cage including an open top, an open bottom, at least three attached adjacent peripheral sides and two other peripheral sides, each of the two other peripheral sides side attached to one each of two of the at least three attached adjacent peripheral sides, one interior wall of one side of the attached adjacent peripheral sides having a plurality of conductive buses located thereon, the cage enclosing at least three" (see claim 1, about lines 8-14, claim 3, lines 5-8), " must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

Art Unit: 3729

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this case, the claimed subject matter such as "providing the cage including an open top, an open bottom, at least three attached adjacent peripheral sides and two other peripheral sides, each of the two other peripheral sides side attached to one each of two of the at least three attached adjacent peripheral sides, one interior wall of one side of the attached adjacent peripheral sides having a plurality of conductive buses located thereon, the cage enclosing at least three" (see claim 1, about lines 8-14, claim 3, lines 5-8) was not described in the specification and or drawings.

Note that fig 13 directed to an elected invention of claims 1 and 3 which described in the specification pages 14-15, about paragraphs 69-73 where the method for vertical and horizontal stacked IC package without the use of flex PCB or buses.

Further, it also noted that Fig. 13 of the elected invention does not contain the subject matter of claims 1 and 3 where the cage having open top and open bottom as recited in claims 1 and 3.

4. Claim 1 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The scope of the claims is not clear because the claimed subject matter is not fully disclosed in the specification also the specification teach away from the use of buses or Flexible PCB in the horizontal stacking of the IC circuit.

5. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Burns (5,566,051). This rejection is set forth in prior Action, paragraph 8.

6. Claims 1 and 3 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns (5,566,051) in view of Nishino (5,343,075). This rejection is set forth in prior Action, paragraph 10.

### ***Response to Arguments***

7. Applicant's arguments with respect to rejected claims 1 and 3 have been fully considered but are not persuasive.

The 112

Note: the amendment to the claims does not overcome the rejection under 112, 1<sup>st</sup> paragraph. Therefore claims 1 and 3 remain finally rejected under 112 first and 112-second paragraph (see above).

#### The Drawings

The drawings are objected to for reasons set forth above. Further, in order to clarify the claimed subject matter. It is suggested that applicant may submit large, clear sketches, which show the claimed subject matter in a way in order to overcome the 112 first paragraph rejections.

#### The prior Art

Applicant's arguments have been carefully reviewed and not found to be persuasive. Applicants argument that the prior art reference fails to teach the amended to the independent claims 1 and 3 calling for "providing the cage including an open top, an open bottom, at least three attached adjacent peripheral sides and two other peripheral sides, each of the two other peripheral sides attached to one of two of the at least three attached adjacent peripheral sides, one interior wall of one side of the attached adjacent peripheral sides having a plurality of conductive buses located thereon, the cage enclosing at least three adjacent peripheral sides of the plurality of sides of each primary integrated circuit package of the stacked plurality". The Examiner disagrees because the prior art teaches the above feature such as in Burns reference various related embodiment i.e., Fig 12a-12b shows the cage configuration having top and bottom opens for accommodating IC stacking in either orientations such as vertical or horizontal, as well as the connecting at least one outer lead to the plurality of outer

Art Unit: 3729

leads 38 of the stacked plurality of P2's to at least one conductive bus 112 of a plurality of spaced traverse conductive buses 112 and 112a therefrom (see Figs. 15-16). Noted that Fig. 14, shows a number of leads 38, and Fig. 16 shows a plurality of spaced traverse conductive buses 112 and 112a as same as that as claimed by the present invention.

Applicants' arguments do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the rejections made. Further, they do not show how the amendments avoid such references or rejections.

8. This application contains claim 4 drawn to an invention nonelected. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

#### **Interviews After Final**

9. Applicants note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing). Such an interview may be granted if the examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations which would require more than nominal reconsideration or new search will be denied. See MPEP 714.13 and 713.09.

***Conclusion***

10. It is noted that any amendment made to the disclosure and the claims. Applicant requires to point out the support provide numeral references to the claimed limitations as well as support in the disclosure (i.e., page and line numbers and reference number associated with from the drawings) for better clarity (See 37CFR 1.111 and section 2163.06 of the MPEP).

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Trinh whose telephone number is (571) 272-4569. The examiner can normally be reached on Monday -Thursday 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mt  
2/26/07

  
MINH TRINH  
PRIMARY EXAMINER